

REMARKS

The applicants respectfully submit that no new matter has been added. It is believed that this Amendment is fully responsive to the Office Action dated **January 30, 2004**.

Claim Rejections under 35 US §103

Claims 1-5 are rejected under 35 USC §103(a) as being unpatentable over Wood (U.S. Patent No. 6,178,514) in view of "Universal Serial Bus Specification" Revision 1.0, January 15, 1996 (hereinafter USB Spec).

The present invention is a portable electronic device (1) connected to a personal computer (2) via a USB cable (11). An external power source (3) may be connected to USB connector (4). When the external power source (3) is connected to the USB connector (4), the voltage detected is less than 4.4 V and CPU (7) causes charging of the built-in secondary cell and execution of device operation processing based on user input to the device. When the external power source (3) is not connected to the USB connector (4), the voltage detected is greater than or equal to 4.4 V and CPU (7) causes USB controller (6) to start data communication processing.

Wood describes a USB cable (28) connected to a USB hub (42) that is in turn connected to a USB device (62), such as USB speakers (22) or a USB keyboard (16). If the USB device (62) is intended to draw more than 500 mA of current, it is typically provided with its own external power supply. When a controller (224) determines that an external power supply is not present, then the

controller communicates to the USB hub (42) that the USB device should be considered as a low power device.

Universal Serial Bus Specification indicates on page 135, Section 7.2.2 that

“All hubs and functions must be able to provide configuration information with as little as 4.40 V at the connector end of their upstream cables. Only low power functions need be able to be fully operational with this minimum voltage.”

Further, page 114, Section 7.1.3 of Universal Serial Bus Specification states,

“The pull-up terminator is a 1.5 k Ω +-5% resistor tied to voltage source between 3.0 V and 3.6 V referenced to local ground. The pulldown terminators are resistors of 15 k Ω +-5% connected to their local ground.”

In the Office Action, the following three issues are raised regarding claim 1.

A. It is asserted that Wood teaches on col. 9 lines 39-59 a control circuit discriminates among sources of supply of power and causes a common serial bus controller to execute a predetermined data communication processing while power is supplied from an information processing device connected to a common serial bus connector, or executes a usual device operation processing while power is supplied from an external power source connected to the common serial bus connector.

B. It is asserted that USB Spec teaches power voltage is greater than or equal to 4.4 volts and is supplied from a host device connected to a common serial bus connector (page 135, Section 7.2.2 third bullet, "All hubs and functions must be ... with this minimum voltage").

C. It is asserted that USB Spec teaches power voltage is less than 4.4 volts and is supplied from an external power source connected to a common serial bus connector (page 114, Section 7.1.3 line 5, "The pull-up terminator ... between 3.3 V and 3.6 V").

The applicant disagrees with the Examiner's assertions with respect to points A. and C. above.

Even if Wood describes being supplied with power from an external power source connected to a different port from a USB connector and executing a device operation processing, Wood does not describe executing a usual device operation processing while power is supplied from an external power source connected to a common serial bus connector (col. 10 lines 10-13 and col. 28 line 56 to col. 29 line 8). Wood is based on the premise that a USB device may be connected to both a computer and an external power source at the same time.

Section 7.1.3 of USB Spec only describes a pull-up resistor to a communication line tied to a voltage source between 3.0 v and 3.6 V. The USB Spec does not mention that this source is connected to a common serial bus connector to supply power to a control circuit.

The present invention is based on the premise that a common serial bus connector serves as a common terminal to connect either an information processing device or an external power source so that power can be supplied. The present invention is characterized in that when an external power source is connected to a common serial bus connector, a usual device operation processing is executed while power is supplied from the external power source via the common serial bus

connector. This feature is not described by either of the cited references and cannot be obtained even if the voltage requirement of USB Spec is made part of the device of Wood.

Therefore, the Examiner's grounds of rejection as discussed above is strongly traversed.

Independent claim 1 patentably distinguishes over the prior art relied upon by reciting,

“A portable electronic device comprising a common serial bus connector provided with data terminals and a power supply terminal in compliance with a common serial bus standard for connecting a plurality of peripheral devices in common to a host information processing device, a common serial bus controller for executing predetermined data communication processing attendant on data communication with an information processing device connected to the common serial bus controller connector, and a control circuit connected to the common serial bus controller for executing device operation processing for the usual operation of the electronic device, the electronic device being capable of receiving a power supply from the information processing device or an external power source as connected to the common serial bus connector or from an internal power source, the portable electronic device being characterized in that the control circuit discriminates among the sources of supply of power and causes the common serial bus controller to execute the predetermined data communication processing while power voltage is greater than or equal to 4.4 volts and is supplied from the information processing device connected to the common serial bus connector, or executes the usual device operation processing while power voltage is less than 4.4 volts and is supplied from the external power source connected to the common serial bus connector.”
(Emphasis Added)

Therefore, withdrawal of the rejection of Claims 1-5 under 35 USC §103(a) as being unpatentable over Wood (U.S. Patent No. 6,178,514) in view of “Universal Serial Bus Specification” Revision 1.0, January 15, 1996 (hereinafter USB Spec) is respectfully requested.

Conclusion

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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